is an important condition for the existence of shade flora. In such plants, in order that the daily products of photosynthesis may compensate the respiration of darkness, there is required at 18° C. an average illumination of little more than 0.01 light; and in order that growth may be maintained, in the case of *Oxalis*, a minimum daily illumination of 0.25 light for somewhat more than an hour. In sun plants an equilibrium between respiration and photosynthesis is reached at about 0.025 light.—GEO. D. FULLER.

Prothallia from sex organs of Polypodium.—STEIL[9] has reported that "in an old culture of *Polypodium irioides* the sterile cells of a large number of antheridia and archegonia became vegetative like ordinary prothallial cells." No case of regeneration from the sex organs of a pteridophyte has been reported previously. The cap cell and ring cells of the antheridia produced prothallial filaments and secondary antheridia; while the cells of neck and venter of the archegonia also produced filaments and antheridia, but in no case secondary archegonia. The antheridia produced in this way reached maturity, developing actively motile sperms. It was impossible to state under what cultural conditions the cells of the sex organs regenerated, but it is suggested that the peculiar behavior was the result of unfavorable conditions which appeared in the old culture.—J. M. C.

Oxalophytes over limestone.—Recent studies by SALISBURY and TANSLEY[10] have shown that *Quercus sessiliflora*, regarded as a decided oxalophyte, occurs in the regions under consideration over limestones. Analyses, however, prove that leaching has so reduced the lime content of the surface soils that they are often really acid in their reactions, and hence the oak seedlings and the accompanying calcifugous herbaceous vegetation really develop in a non-calcareous or even in an acid soil. This adds another to the rapidly accumulating array of facts indicating how dangerous it is to assume that calcareous rocks always give rise to calcareous soils.—GEO. D. FULLER.

Stock-poisoning plants.—LAWRENCE[11] has published an account of the principal stock-poisoning plants of Oregon for the use of "the Oregon farmer or stockman." The statement is made that "the annual toll of the poisonous plants in Oregon is surprisingly heavy." It is of interest to botanists to note that the principal poisonous plants of Oregon are *Delphinium* (6 spp.), *Zygadenus* (2 spp.), *Cicuta* (3 spp.), *Lupinus* (1 sp.), *Astragalus* (1 sp.), and *Pteridium* (1 sp.).—J. M. C.

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[9] STEIL, W. N., The development of prothallia and antheridia from the sex organs of *Polypodium irioides*. Bull. Torr. Bot. Club **48**:271–277. *figs. 4.* 1921.

[10] SALISBURY, E. J., and TANSLEY, A. G., The Durmast oak-woods (*Quercetа sessiliflorae*) of the Silurian and Malvernian strata near Malvern. Jour. Ecol. **9**:19–38. *pl. 1.* 1921.

[11] LAWRENCE, W. E., The principal stock-poisoning plants of Oregon. Oregon Agric. Coll. Exper. Sta. Bull. 187. pp. 42. *pls. 2. figs. 10.* 1922.